

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063391 A1

(51) International Patent Classification⁷: B01J 35/00, 23/38, 23/56

(21) International Application Number: PCT/JP2004/018333

(22) International Filing Date: 2 December 2004 (02.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 2003-431009 25 December 2003 (25.12.2003) JP

(71) Applicant (for all designated States except US): NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa, 2210023 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SHIRATORI, Kazuyuki, SUGA, Katsuo, NAKAMURA, Masanori, WAKAMATSU, Hironori, YASUDA, Hirofumi.

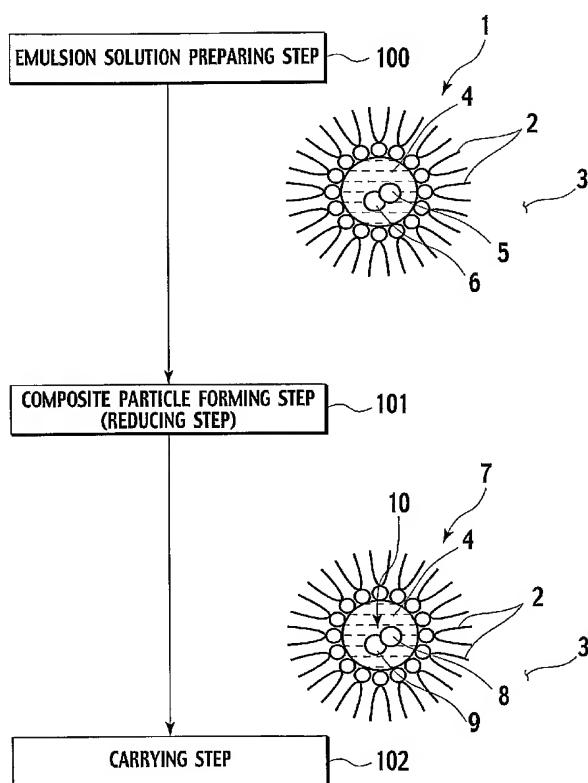
(74) Agents: MIYOSHI, Hidekazu et al.; Toranomon Kotohira Tower, 2-8, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: HEAT-RESISTIVE CATALYST AND PRODUCTION METHOD THEREOF



(57) **Abstract:** A high heat-resistant catalyser formed as a catalyst including a composite particle composed of a noble metal particle and a co-catalytic metal compound particle contacting, as a metal or as an oxide, with the noble metal particle, and a substrate carrying the noble metal particle and the co-catalytic metal compound particle, is produced by having a noble metal salt aqueous solution and a co-catalytic metal salt aqueous solution concurrently provided in a reverse micelle preparing reverse micellar solution containing a noble metal precursor and a co-catalytic metal precursor, and having a substrate carrying a composite particle comprising the noble metal precursor and the co-catalytic metal precursor concurrently reduced as a noble metal particle and a co-catalytic metal particle, respectively.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*